Logistics engineering essay sample

Technology, Future

1. If you were Skip Grenoble, which alternative would you advise Jim Beierlein to implement? What criteria would you use to arrive at your decision?

If I were Skip Grenoble, an alternative I would advise Jim Beierlein to implement is to use air transportation initially then switch to ocean transportation once they have reached their profit and service goals. This strategy will allow the flexibility they need at the beginning when they are getting a feel for the market and if their projected annual demand holds true.

2. At what level of demand (in pounds) per year would these two alternatives be equal?

Ocean Transportation:

Variable Cost= Total Cost-Fixed Cost=$823, 000-$600, 000=$223, 000

Variable Cost/Units=$223, 000/2. 5 million lbs.=$0. 0892/lb.

$600, 000+$0. 0892x (x= demand in lbs.)

Air Transportation:

Variable Cost= Total Cost-Fixed Cost=$800, 000-$450, 000=$350, 000

Variable Cost/Units=$350, 000/2. 5 million lbs.=$0. 14/lb.

$450, 000+$0. 14x (x = demand in lbs.)

Therefore:

$600, 000+$0. 0892x=$450, 000+$0. 14x

$150, 000=$0. 0508x

X= 2, 952, 755. 906= 2, 952, 756 lbs.

Ocean transportation cost equals air transportation cost when the demand is 2, 952, 756 lbs.

3. Graphically represent these two alternatives and their tradeoff point.

4. Which alternative would you recommend be in place to accommodate future demand growth? What additional factors should be considered?

If the initial choice of transportation is air, I would recommend that an ocean freight company is lined up for the future when the demand grows. This is due to the fact that in the long run it would be much cheaper to have all merchandise transported by ocean versus air. Additional factors that should be considered are the lead time, inventory holding cost, cost to load/unload boat, and transportation to the marina.